

Q&A: Can AI and creativity coexist?

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One of the Writers Guild of America's demands in its current strike is for studios to regulate the use of artificial intelligence for creating, writing and rewriting TV and movie scripts and other material.

That might have sounded like a far-fetched concern just a few years ago. But with increasingly sophisticated, easily accessed AI tools already making inroads in other creative fields—literary magazines and fine arts competitions have lately had to contend with a glut of AI-generated

submissions—there is a very real concern that expensive, time-intensive human creative labor could soon be outsourced to machines.

Higher education has reached an inflection point, too, now that AI tools can pass graduate-level exams and write serviceable essays at the touch of a button. Already, UCLA has posted a faculty guide and held a virtual town hall on the subject.

"We in the humanities have long thought about these kinds of questions, especially at the experimental limits of what constitutes creativity," said Danny Snelson, a UCLA assistant professor of English and a writer, editor and archivist. "Lately I've been thinking about this artwork by Robert Rauschenberg from 1961 in which he sent a one-line telegram: 'This Is a Portrait of Iris Clert if I Say So.' It's a perfect rejoinder to where some of the debates about creativity and AI are right now."

Jacob Foster is a UCLA associate professor of sociology, computational social scientist and co-director of the Diverse Intelligences Summer Institute, which unites scholars to explore cognition in all forms. He also has pondered the revolution that appears to be unfolding.

"Something terrible and amazing is about to happen, but no one has a full idea what these systems are capable of—or an entirely clear picture of how they do the things that they do," he said.

In a joint interview, Foster and Snelson spoke about how chatbots could be used in teaching, offered historic analogs for the current AI explosion and opined about whether technology is actually capable of creativity. Answers have been edited slightly for length and clarity.

Are you excited or concerned about where AI is headed—or both?

Jacob Foster: I'm excited, given my broad interest in how complex wholes become smarter than their parts. I agree with the school of thought that says AI creates opportunities to get at a more fundamental understanding of—and clarity about—things like intelligence and creativity.

Danny Snelson: I'm tremendously excited watching these developments unfold, but in a physiological sense—an excited state of fight or flight. Things are moving faster than we can understand them. These developments change things in ways that matter. The effects of algorithmic bias are real and the harms of technological development are never equally distributed.

Foster: To that point, I recently asked ChatGPT to write short plays about the nature of creativity. Until I explicitly told it that the expert on creativity had to be a woman, it always came up with a story about a singular male genius interacting with a female muse or with a female petitioner seeking his advice.

When you read the technical report for GPT, they have worked very hard to tamp down on problematic responses—for example, using reinforcement learning with human feedback—but even this neutral prompt resulted in a gender-biased response. AI is a mirror of the things we've written and the stories we've told, and that becomes a much bigger deal when it's potentially determining who gets jobs or certain insurance rates.

I'm helping to organize a program at our Institute for Pure and Applied Mathematics on the mathematics of intelligences, and trying to develop the theoretical foundations of AI is obviously a big motivation. But there are fascinating additional basic research challenges. I don't think we have the resources within social theory to think about the possible rearrangements of society that such technologies could enable. We don't

know how to deal with social change that's happening so quickly and pervasively.

Is AI capable of creativity?

Foster: We often reserve the notion of creativity for the capacity to generate interesting, novel things. But the contrarian part of me wants to argue when people say, "Large language models aren't creative; they're just putting things together." Humans do that, too—look at many of the papers produced by students or academics!

Snelson: These systems reveal just how formally consistent most writing is. The more generic the formats that these predictive models simulate, the more successful they are. These developments push us to recognize the normative functions of our forms and potentially transform them. After the introduction of photography, which is very good at capturing a representational space, the painterly milieu developed Impressionism, a style that rejected accurate representation altogether to linger with the materiality of paint itself.

Foster: I think of the short film "Sunspring," directed by my friend Oscar Sharp, which came out in 2016 and was the first movie written by AI. The script itself is only borderline coherent—this was a much earlier iteration of the technology—but it becomes something much more elevated when interpreted by the human actors, director and viewers.

Snelson: William S. Burroughs would cut up different texts and smash them together to produce a kind of surrealist energy. And he said this beautiful thing, which is that by using this cut-up method, you're cutting into the present for the future to leak out. Right now, we have an opportunity to think about these new forms of fluid, coherent, algorithmic writing and how we might cut into them to see what they might reveal.

Can ChatGPT actually be an asset in teaching at the university level?

Snelson: In my Intro to Comics course, my students collectively wrote a full book in the first week, before they knew anything about the subject, using ChatGPT. I think it's useful for them to experiment with the essay, and then for the rest of the course we instead use comics formats to produce new knowledge about comics.

I mean, if you're working on the essay as your subject of study, then definitely get deep into the essay format—but you understand media formats best when you're working with that media directly. Put otherwise, we want our students to use modes of critical thinking to navigate the world around them, which now includes these AI tools. Experimenting and playing with them will prepare students, hopefully, to think critically in a technological environment that's always changing and shifting.

Foster: That's a very helpful tonic for the prejudice that the essay is a necessary gym to build the skills we want students to have. It's of a type with my faintly ludicrous "old person" attitude that me learning how to use card catalogs made me uniquely capable to deal with the internet age.

Snelson: Right now, for example, there's a moral panic in academe about essays. Having taught the fundamentals of argumentation, evidence and rhetoric for over a decade, I can tell you essay writing is not a mysterious formula. The essay has stood strong for a while now; it has limitations that other modes—some of which are still to be invented—may yet be better at when it comes to inspiring students to develop the kind of critical thought needed to address generative algorithms.

How will we look back on this moment in time?

Snelson: If the history of major technological inventions is any indicator—I'm thinking here of the [printing press](#) and the internet—we'll look back at this time as a moment of confusion and flux with a huge amount of widespread misunderstanding, and, hopefully, with unexpected avenues toward a better future.

It makes me think of this great anecdote by Rudy Rucker, who helped invent the genre of cyberpunk fiction in the 1980s. At some point, he woke up with this universal computing device in his hand that could access all of human knowledge while still living in the extreme disparities of contemporary America and he realized that a cyberpunk future was already well underway.

Foster: In some sense, this is a generalization and acceleration of the experience humans have always had negotiating a world of vast forces far beyond themselves.

As folks like the computer scientist Danny Hillis and mathematician Norbert Wiener have remarked, we've been dealing with artificial intelligence for centuries, in the form of corporations and bureaucracies that take human beings as their parts and turn them into vast, impersonal collective machines. Will we be able to tame or resist these new machines? I hope so.

Provided by University of California, Los Angeles

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